Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgement before publication.

Health Hazards in Industry

TO THE EDITOR: Industrial medicine has been my primary interest for over 25 years, so I was pleased to receive the December 1982 issue of the journal.

I am used to getting strange reactions when asked about my "specialty," as though I have a touch of the blue collar. Not quite so bad, however, as a venereologist I once knew whose hostess, on learning of his calling, followed him around the house wiping the doorknobs.

Unfortunately I got the same feeling after reading your introductory editorial ("The Tip of a Huge Iceberg?").[1] In your effort to upgrade occupational medicine you ignored human factors, which form the basis of our specialty. As several of your contributors pointed out, occupational or industrial medicine has been with us for a very long time. So has our knowledge of the hazards of asbestos. Yet (in discussing one company that sought relief in bankruptcy) you suggest that this is some scientific breakthrough born of young investigators, which is about to tear our social fabric asunder.

As long ago as 1906 British investigators gave evidence of the hazards of asbestos,[2] and the literature has been replete with warnings ever since. With regard to the litigation concerning asbestos I am afraid you have missed the whole point clearly enunciated in *Borel v Fibreboard Paper Products Corporation.*[3] The social evil was that the defendants had a "duty to speak but remained silent." This is not a new social phenomenon but one as old as the garden of Eden—deceit. As long as industry employs such methods we shall require an overburdened legal system to counterbalance them. No doubt this most recent ploy of using Chapter 11 bankruptcy in a solvent corporation will now require the efforts of a host of bankruptcy lawyers to litigate the claim.

One of your contributors notes a code of ethics for occupational physicians. One tenet of his code is that a physician should communicate information about the health hazards of industry. Can you imagine what would happen to an employee physician should he dare to rock the ship of industry—you know well who would perish.

Remember the Titanic ran into the tip of that huge iceberg although her captain had been well and truly warned of the perils. Perhaps the captains of industry should be put on notice of a similar fate should they stay speeding on the same course, disdaining all warnings.

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2. Cooke WE: Pulmonary asbestosis. Br Med J 1927 Dec; 3:1024
3. *Borel v Fibreboard Paper Products Corporation,* 493 F2d 1076 (1973)

What Does the Future Hold for Medicine?

TO THE EDITOR: Last week I referred a woman whom I suspected of having a transient ischemic attack (TIA) to a neurologist for his opinion. Today this lady came into my office, boiling with anger: "He saw me for 20 minutes, asked me a few questions, told me to touch my nose, tapped my kneecap and charged me $94.50. That figures out at $5 a minute!"

Remembering the day when I was quite happy to receive $5 for a 45 minute house call I reflected, with sadness, upon what has happened and is happening to the practice of medicine.

The magnitude of these changes and the impact they are exerting on health care in our country are skillfully analyzed by Paul Starr in his new book *The Social Transformation of American Medicine.*[1] This scholarly analysis of the evolution of our system of health care over the past two centuries could be called "The Rise and Fall of the Medical Empire." The author, a youthful Harvard professor of sociology, has done extensive research, and has made an unbiased prognosis of what the future holds for the practice of medicine.

His forecast is not bright. The past 50 years have been the golden years of medicine. Physicians attained virtually complete control of every aspect of medical care. With sophisticated machinery and an almost endless array of drugs we gained new powers to diagnose and treat.

Hospitals, no longer the asylum of the desperately ill or for those in need of surgical treatment as a last resort, now became our medical workshops, subsidized by the government or other third party payors.

The cost of this "progress" has been enormous. Medical fees have soared. Nonprofit hospitals are in the black, and health care corporations are moving in. Open-ended hospital charges are threatened. Individualistic private practice and fee-for-service are facing extinction.

Starr has given us a studious documentation of the past and present history of the practice of medicine as

it evolved to a science and finally to an industry. It is good reading, copiously referenced, carefully indexed, an authoritative look at the past, present and future of health care in America.

One conclusion is unmistakable: The day of the $5 a minute medical fee will soon be over.

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1. Starr P: The Social Transformation of American Medicine. New York, Basic Books, 1983

The Greatest Risks of Nuclear Power

TO THE EDITOR: Although I found the article by Hendee[1] on risks of medical radiation to be, for the most part, both interesting and enlightening, I believe that Figure 3 and the commentary on it in the text are both misleading and inaccurate. This figure, "adapted from Sinclair,"[2] compares the "actual risk," and the risk as perceived by various social groups (professionals, college students and League of Women Voters) in deaths per year for nuclear power and x-rays, to four other "societal activities" (smoking, motor vehicles, electric power, swimming). Sinclair,[2] however, only lists the rank order of 30 activities as perceived by these groups, and not projected death rates as the figure implies (that is, college students did not project 150,000 deaths per year as the figure shows but did rate nuclear power the most hazardous of 30 "societal activities" that also included swimming, bicycling, mountain climbing, skiing and school football). While Hendee states that nuclear power is the *least* hazardous of the 30 activities listed by Sinclair, Sinclair lists nuclear power 20th, accounting for an estimated 100 deaths per year, four times that of power mowers and school football, five times that of skiing and ten times that of vaccinations, and has no statistics for five of the activities. Hendee does not mention that x-rays were ranked ninth on the list with an estimated 2,300 deaths per year. Hendee does not state how the numbers for the "actual risks" (100 deaths per year per nuclear power) were obtained. While the deaths per year of motor vehicles or school football are probably easily obtainable, the calculation of risk of nuclear power or x-rays must take into account numerous estimates and assumptions. Even if the calculated risks are correct and the danger to an individual person is less for nuclear power than it is for swimming or motor vehicles, the latter are risks the individual may choose not to take.

A recent letter to the editor of the *Annals of Internal Medicine*[3] complained that a paper was misleading because the authors failed to update the references in their literature review (something that is difficult, considering the present lag time between manuscript submission and publication). Hendee's paper does the opposite and fails to "backdate its references." Figure 3 is said to be "adapted from Sinclair." However, Sinclair presents the data in a different form with minimal explanation claiming adaptation from *Decision Research,* but references a paper in *Dun's Review* by Howard and Antilla.[4] Howard and Antilla give unreferenced results of a public opinion poll conducted by a firm called Decision Research on how three groups ranked the risks of various products and activities. They say that the pollsters concluded that people are more willing to accept familiar controllable risks than less familiar, uncontrollable risks. They do not state how the "actual risks," were calculated.

Hence, Hendee's presentation makes light of the risks of nuclear power by making frivolous comparisons of distorted data taken out of context. Isn't it ironic that he complains about "well meaning scientists and political action groups" who distort the risks of radiation exposure? Although I am not personally panicked over the use of nuclear power, as a nonsmoker, nonskier, nonmotorcycler and non-mountain climber, I find the risk of nuclear power greater to me personally. I appreciate that public safety does require some degree of regulation and safeguards for virtually all of the 30 activities listed (such as motor vehicles, handguns, motorcycles, private aviation, commercial aviation, prescription medications and pesticides).

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2. Sinclair WK: Effects of low-level radiation and comparative risks. Radiology 1981; 138:1-9
3. Warner BA, Cooper DS, Ridgeway EC: The medical-literature system: Gold or gold-plated? Ann Int Med 1983; 98:562
4. Howard N, Antilla S: What price safety? The zero-risk debate. Dun's Review 1979; 114:48-57

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TO THE EDITOR: William Hendee, in "Real and Perceived Risks of Medical Radiation Exposure,"[1] makes the parenthetical point that nuclear power is vastly overrated as a hazard based on his graphic representation of public opinion research previously reported in *Radiology*.[2] A few details of his analysis merit comment.

The fact that Dr Hendee has converted ordinal to cardinal data in order to present the original opinion ranking on the same scale with "actual risks" (deaths per year) is more excusable than is his statement "nuclear power is the least hazardous of all 30 of the activities included in the poll." In actuality, it was listed as number 20 in the source he cited.[2]

Central to his argument is the estimate of 100 "actual" deaths per year for nuclear power.[2] With 75 operating nuclear power plants, this corresponds to a figure of about 1.3 deaths per plant-year of operation, which is within the range of 0.07 to 2 quoted in one study.[3] However, subsumed within this total are 0.07 to 0.3 deaths per reactor-year due to "long-lived isotopes in waste gases, *discounted at 5 percent*" [italics mine]. The need for discounting is explained: "The radioactive gas radon will continue to be produced in uranium mill tailings and uranium mines for tens of thousands of years . . . and will apparently inflict small but continuous health risks on future generations. If